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ABSTRACT

When taxation is based on ability to pay and programs are targeted at a minimum service level, every state with any population that requires the service must participate. States and localities receive grants only because groups and individuals are to be treated equally. The role of the recipient government is the provision of the minimum prescribed services. The reason for the program or the target population chosen is the national interest. Net gains or losses from taxes paid and grants received by a state or locality should be of little consequence in public policy. The redistribution among states is not as important as the redistribution among individuals. The important questions are the number of recipients in a government jurisdiction and the dollar amount of the service they receive contrasted with the number of taxpayers in the jurisdiction and the dollar amount of taxes paid. Classification of federal payments to states by these varied principles of taxation and the redistribution of funds by classes of persons by income or recipients and taxpayers would help to separate the issues involved in redesigning or changing grant formulas. (Author)

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OCCASIONAL PAPER #24

REDESIGNING FEDERAL GRANT PROGRAMS

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REDESIGNING FEDERAL GRANT PROGRAMS

The major conditional Federal grant programs in the United States including those for education have been designed with two primary objectives: (1) the achievement of national minimum levels of certain basic public services and (2) the equalization across jurisdictions of the fiscal effect required to provide these minimum program levels. The Federal Government has relied almost solely on conditional grants. General Revenue Sharing (GR3) to States and localities is the major program of uncondtional grants and to the extent that educational spending is prohibited in GRS, this program could also be looked upon as a partial conditional grant.

To meet these twin objectives, the grant formulas for most educational programs contain terms to reflect both need and fiscal capacity (where the latter is typically measured by the level of per capita income). The share provided by the Federal Government varies directly with some measure of need such as children in low income families and, inversely, with per capita income. The goal is that every jurisdiction provide at least a specified minimum level of the public service and be able to support that service level with a set of tax rates that is essentially the same as in other areas. In programs such as Title I ESEA, the objective is to identify a target population which the Federal Govern-

ment believes needs special assistance and which, if it were not for the Federal program, might be neglected. This subobjective of special populations remains within the general twin objectives. This view from the Federal standpoint is probably best seen by looking at the components of State and local expenditures, including those for schools.

This level of State and local expenditures (E) is a function of the workload (W), the price level in the State (P), and the quality level of service (Q), that is: $E_i = f(W_i, P_i, Q_i)$ where "i" stands for States or localities with different values. The workload measure for elementary and secondary education is the number of children 5 to 17 years of age, or the number of public school enrollees. As a relative measure of need for a State, the Federal Government might choose either one. The population numbers, i.e. children aged 5 to 17 years, gives a measure of potential and the burden of need regardless of whether children are enrolled in public or private schools. If a State does not seek to have all its children of these ages enrolled in school, then the use of pupulation figures gives the State a relative advantage compared to other States. Attention is directed here to the fact that there can be variation in the measure of need and that it is rarely measured to everyone's satisfaction. A measure of need with a tolerable range of error is accepted in most aid formulas. Aid formulas typically go further than an overall measure of the workload (W_i). Typically part of

the workload are identified for special treatment. Within Federal grants for education, one could identify several subpopulations such as low income children, children requiring special educational services (Public Law 94-142) and children receiving vocational education.

The workload measure for public elementary and secondary education then becomes:

$$W_i = N_i + LI_i + SE_i + VE_i$$

where, N_i = Normal children

LI_i = Low Income children

SE_i = Special Education children

VE_i = Vocational Education children

The workload may become further subdivided among programs supported. For school lunch, the workload could be W_i with no modification as to type of student while for instructional programs or transportation children would be classified as above. The classification might be looked at as it is in school lunch where the measure of need is the workload is divided into subcategories as follows:

$$W_i = A_i + NSL_i + FL_i$$

where, A_i = Students who receive prescribed lunch

NSL_i = Students who do not participate in school lunch

FL_i = Students who receive free school lunch

These categories of workload attempt to recognize a Federal obligation to individuals for some minimum service level. The Federal support uses the State and local governmental structure to target individuals as part of an identifiable

group for a minimum service level that is to be financed from Federal, state, and local partnership. The reasoning for the program is indicated below.

The manpower needs of the country require that each person should receive a minimum of education. For some children, the lack of a nutritious breakfast or lunch precludes their learning. Among the alternative delivery systems for assuring a basic diet are the schools and their feeding programs. Provision of nutritious meals to students by the schools is perhaps the best alternative available. Funds are only provided if the meal is given the student. Food money is not liable to be diverted to other expenditures of the family. Nutritional needs are more easily policed than by other methods. A given quality of the program is more easily assured than by other methods. This type of Federal conditional grant to States and localities merely uses the schools as the delivery system. The fiscal effort required is usually assumed to rise proportionally with per capita income. The price level of the program and the quality of the minimum service level is assumed constant across the Nation. Therefore high per capita income States are required to bear proportionately more of the cost of the program for their own children so classified than low per capita income States.

The general assumption is often that high per capita income States must not only make the same fiscal effort but that these States receive a smaller proportion

of support than low income States. A high income State might provide the minimum service if the Federal Government provides 25 to 30 cents on the dollar cost of a program. A low income State would probably provide the minimum service level only if the Federal Government provided 75 to 70 cents of the dollar cost. States with per capita income levels near that of the United States could be induced to provide the minimum service level with 50 cents of the dollar cost coming from the Federal Government. The overall program cost may reflect 50-50 sharing between the Federal Government and all States and localities. The variable matching grant outlined above is typical of many Federal programs of aid to localities. The use of this formula assures minimum service levels with a restricted use of Federal dollars. Implicit in these programs is the assumption that high per capita income States and localities often will provide a program with greater quality than that of the minimum service level while average or below average per capita income States will not even provide the minimum service level without the Federal inducement. The minimum service level may be justified as above for the school lunch program on a national need, or it may be justified on the basis of the mobility of the population. In the former, the justification is that every citizen of the Nation should have the minimum service need. The failure to provide the service level harms not only the individual but also the Nation. Therefore the resources of the entire Nation should

stand behind the provision of the minimum service level. In the latter, the resources of each State should stand behind the individuals in every other State because the benefits from the service provided to an individual do not remain within the providing State but go with the individual even if he migrates to another State. In the terms of the economist, since there are benefit spillovers among States from public services provided, the level of public services will be less than an efficient level desired by the public if spillovers are not compensated to States or localities suffering such losses.

States or localities with benefit spill-ins compenstate States or localities with benefit losses. This often becomes generalized to the fact that inmigration States should compensate outmigration States. Furthermore, since migration is generally from low income to high income States and localities, relative fiscal capacity as measured by per capita income used in a Federal grant shifts funds in the right direction to account for benefit spillovers. Thus Federal grants for minimum service levels is one way to approximate a solution for benefit spillovers. Empirical evidence on the amount of benefit and cost spillovers and their direction among States and localities is lacking. Empirical evidence would indicate the extent to which Federal grants distributed inversely to per capita income approximate compensation for benefit spillovers and assured an efficient level of public service.

In the absence of such empirical evidence, one can raise some questions about the direction of the spillovers. Assume that there are two groups of migrants -- one group brings spillover benefits; the other brings spillover costs. It is generally assumed that there is only the spillover benefit group. Normally an inmigration State receives a great deal of human capital for which it made no investment. If migration is mainly toward employment or better employment opportunity, the Nation benefits because manpower is better utilized. The economy of the inmigration locality, region, and State benefits because it grows and it does not suffer from bottlenecks due to shortages of manpower. Obviously, there are spillover benefits here which account for a goodly proportion of the mobility of the population. Nonetheless, let us turn our attention to a group that could bring spillover costs.

Displaced farm laborers with little education and little skill may migrate from rural areas to the city because they have lost their jobs to automated farm machinery and large scale farming. From the standpoint of these migrants, their behavior is identical to the group above that provided benefit spillovers. These workers are seeking employment or at least better opportunity for employment than existed in their former places of residence. From the standpoint of the inmigration jurisdiction, these migrants may increase the need for people services in terms of welfare, health, and so forth. Furthermore, their large

numbers combined with indigenous population near the low end of the income distribution may worsen the wage condition of the entire group, placing further demands on local public services. It would seem that some of the inmigration to cities have been of this nature. Thus, there needs to be a crossflow of compensation for spillovers. Inmigration States receiving benefit spillovers need to compensate outmigration States which incurred losses. However, inmigration cities receiving cost spillins need to be compensated by outmigration jurisdiction partially responsible for the cost migration. Under these conditions Federal grants need flow not only inversely to fiscal capacity of States but also directly to spill-in costs to areas within some States. Furthermore, cost distributed by per capita income, which is acceptable for the inmigration benefit spillover, is no longer valid. Costs need to be assigned to either areas within States or industries which are creating the mass migration as the recently automated farm sector indicated above. Minimum service levels to the individual guaranteed by the Federal Government becomes one way to short cut the need for measurement of the amount and direction of spillovers. If the same service level is provided in all States and localities through Federal financing, then no costs are incurred by migration. Little migration will take place to assure a given service level.

There are several aspects of this Federal financing of a minimum service level in every State and

locality that needs explicating. First, the form of Federal funding may need to differ drastically from that of the present variable matching conditional grants. Second, the real level of minimum service must be the same everywhere. Third, citizens must not suffer from money illusion. Fourth, per capita income differentials may not reflect a true measure of fiscal capacity.

To explicate these four aspects, let us suppose that there are two communities or States, A and B. In State A, per capita income is $5,000 per year; the welfare allowance for housing is $1,250 per year; the housing price index is 200, or double the national index. In State B, all variables are exactly one-half those in State A: per capita income is $2,500; the welfare allowance for housing is $625; and the housing price index is 100. Private wage earners would not move from State B to State A for economic gain. Even if private wage earners received the average per capita income of State A, an individual, judging from the relative price index of housing, would be no better off in real terms. If they suffered money illusion, they might migrate. Recipients of welfare housing allowance, suffering from money illusion, would very likely migrate. In this simple world if the price indexes for all goods and services were the same as that for housing then per capita incomes are equal. State A does not have twice the fiscal capacity of State B. Both States have the same fiscal capacity in real terms. The grant formula designers are suffering from money illusion.

The welfare allowance for housing is equal between the two jurisdictions. The real service level, if not the dollar amount, is equal. This visit to the two hypothetical States yields a posture for Federal financing of minimum service levels at variance with the assumptions of the typical variable matching conditional grant.

A typical Federal conditional grant assumes: (1) standard price level for all jurisdictions, (2) differences in money income measure differences in real capacity; (3) differences in expenditure levels for a program usually reflect differences in quality. There are allowances for price differentials in programs such as Public Law 874 and ESEA Title I where State current expenditure per pupil is used. These allowances are not made uniformly and to some extent mitigated against by allowing the national price level, i.e. United States average current expenditures per pupil for all States whose own expenditure is below that level.

If there are price or cost differentials among States and localities in procuring the same quality of inputs to provide the same service level of service, then these price differentials need recognition in a federally financed minimum service level program. Economic writers in the 1930's suggested that one of the reasons for higher wages in the cities than elsewhere was the fact that the higher cost of land in cities was reflected in wages paid. This may account for some of the wage differential among

localities. However, regardless of the reason, private wages for the same occupation differ among localities and States. This is part of the lament of the textile industry moving from New England to the South. Inasmuch as private wages differ among jurisdictions, then the cost of a particular public service will differ. The only way in which the cost of the public service will not differ is if there are alternative methods of production which permit the substitution of varied machines for the use of labor. Then one would expect the high cost labor areas to use more machines than the low cost areas. This can be observed for a limited number of public services. However, for the vast majority of public services, high wage areas spend more to have equal quality and quantity of inputs of low wage areas.

Suppose that high private wage areas reflect the higher cost of housing which in turn reflects the higher cost of land, then some amount of the higher money income is not a real difference in standard of living. The higher money income fails to reflect a higher real income. Furthermore, in urban areas persons tend to pay each other for services which do not enter the economic stream in rural areas. One might even say that this tendency increases as the population size of a metropolitan area increases. Urbanized populations tend to pay for transportation, to eat meals out, to pay for washing clothes, and even to pay for housecleaning. To the extent that more functions are monetarized in a State or an area within a State, then

there is a higher money income but not necessarily a higher real income. The picture here is not nearly as clear as the difference created by the higher private wages due to housing and land costs. What the monetarizing of services does do, however, is multiply the effect of the higher private wage as more services enter into bargains between individuals. What should be clear is that allowance for higher private wages in the same occupation is the lower bound of establishing differences between real and money income differentials. A reason that the allowance for feeding each other, laundrying for each other, and cleaning for each other should enter into the distinction between real and money income differences is that the extent to which persons use these services tends to rise with income. There are other reasons such as the convenience of the service. A higher income level may only mean a different use of time and not different real goods and services income. If fiscal capacity is a measure of supernumerary income, i.e. income left above that income needed to feed, house, and cloth oneself and one's family at a minimum level, then actual differences in money income may be misleading. Higher money income may alter the manner services are provided and the actual distribution of income. What is needed, at least, is empirical data to indicate the differences among levels of real income. The crucial question is the upper bound on indexing money income to reflect some levels of real welfare. Private wage differentials for the

same occupation give the lower bound.

Differentials in expenditure levels among jurisdictions can reflect price level differences and thus, all expenditure level differences are not quality differentials. Use of a Federal standard workload measure yields differentials which incorrectly are seen as quality differentials. Without explicit measurement of quality differentials, the standard assumption of quality as a residual when workload and price are accounted for in expenditure levels may be misleading. Price differentials have been overlooked too long in Federal programs. Price differentials for same workload among jurisdictions are important. Related to workload, price differentials require identification of populations which deviate from normal workload population in terms of being more or less costly. Not all such special populations have necessarily been identified in education. Nor has the actual price differentials been calculated. Price differentials are impossible for the unserved and for the inadequately served parts of the student population.

Not only does the typical Federal conditional grant fail on three assumptions above but our tools of measurement would make it difficult to meet the objections to these three assumptions in a program of federally funded minimum service level. Vigorous testing of these assumptions is called for. In some areas, adequate statistics can be found. The error of measurement implied should be less than the alternative of doing nothing. The arguments remain strong

for Federal funding of programs in all jurisdictions at a level that would assure some minimum or real service. Future directions should seek empirical data to more closely approximate the objectives of serving individuals, and of relieving States and localities of problems caused by cost spillins. The simple assumption of only benefit spillovers is no longer applicable.

Redistribution by
Federal Programs

Federal tax revenue is collected from individuals and corporations in every State and then spent in the States where Federal operations take place. One can calculate the contribution by States to Federal revenues and also the recipient States. The Tax Foundation provides such data on the Federal "takes" and "pats" by States regularly. These data by and large indicate that New York helps to finance not only all it receives but a share of the rest of the Nation. For a State with above average per capita income that is the way the system of Federal progressive individual income tax operates. As long as the revenue laws are fairly and equitably enforced across the Nation, New York will probably be a State that makes a net contribution to financing all Federal programs. In effect, this means that either for a grant program to States or localities or a minimum service level federally financed for all individuals, the funds New York State and localities receive are in effect transfers from one set of New York State taxpayers to

another. From another viewpoint, one could say that the Federal Government provides no funds to New York State residents. The Federal programs through their expenditure decisions require a service level for one set of New York citizens and through the revenue decisions require another set of New York citizens to pay for the services. Since there is a net loss from the standpoint of New York State residents, the taxpaying set of residents pays not only for the program for other New Yorkers but also contributes to the support of the program in other States. For some programs, the taxpaying set and the recipient set are not mutually exclusive so that there is the possibility of a group which on balance neither gains nor loses. More likely the extent of the gains or losses is modified because a person belongs to both sets. New York could provide the same service level for its residents that the Federal Government prescribes at less cost to its residents because of the leakage to the Federal fisc for expenditures in other States. To justify this leakage, New Yorkers, therefore, need to benefit from national rather than State provision of a service.

The redistribution of funds among States is one measure of the national interest when taxation is on the benefit principle and there is a national attempt to match costs and benefits. The Highway Trust Fund seeks to balance tax revenues with expenditures and in that program taxes such as levy on gasoline are balanced with highway expenditures

nationwide. A national trust fund is used for interstate highways rather than a State trust fund because States may differ in tax revenue provided and highway expenditures if a national system of roads is to be built. State gains or losses in Highway Trust Fund receipts and expenditures merely reflect a national interest as opposed to State interest. When expenditures and revenues are matched on a program with taxes based on benefits received, State gains or losses measure national interest. Only the national match of taxes and expenditures matters to policy making.

Some tax levies are based on the ability to pay principle. In this case, the redistribution among States measures the national interest only if redistribution among groups of individuals is viewed as being in the national interest. For public programs such as Defense, such a redistribution among individuals is accepted as part of the national interest. The redistribution among individuals within a State and among States is part of the national interest in a federally funded minimum service level program. In the case of programs operated directly by the Federal Government, the national interest includes redistribution among individuals if one wishes tax burdens to be distributed on basis of ability to pay. This reason may be operative for federally funded minimum service levels. Another reason for Federal grant programs may be an attempt to correct differences in local ability to pay. In this case, implicit in the program is an attempt to have the

tax burden distributed on the basis of ability to pay.

Both the benefit principle and the ability to pay principle of taxation operates in the funding of education. Property taxes at the local school district level may be based on the benefit principle. In this view, local property, especially residential properties are seen as benefiting from the level of educational expenditures. Attempts have been made to measure the extent of capitalization of both property taxes, the costs, and educational expenditures, the benefits, on local properties. Beyond the local level, State and Federal funds have been provided generally to approximate a tax structure based on ability to pay, at least in the short run. In the long term, one might argue that since investment in individuals through education increases earning ability, the use of an income tax to finance schools is an attempt to match costs and benefits. The short run view rather than the long term view prevails, however, because State and Federal funds tend to be minor rather than a major portion of education funding. State funds have been used mainly to compensate for differences in local ability to pay. Federal formulas by the use of per capita personal income have recognized differences among States in ability to pay. Thus, the national interest in educational funding reflects a belief in redistribution of income from those citizens with ability to pay to citizens with educational needs. When examining monies for redistribution purposes, the appropriate measure

is the income distribution of persons by income class.

Two States with identical per capita personal incomes but with a different distribution of persons by income class would make different revenue payments to the Federal Government and receive different grants from the Federal Government. A State with everyone having nearly identical incomes most probably would have a lower tax payment and a lower Federal grant than a State with a wider distribution of income, and thus, a substantial high and low income class. In this latter State, the high income class increases the tax payment and the low income class increases the Federal payment as either the need for the Federal program or the target group increases. The Federal role transfers funds from one group of citizens in a State to another within the State or locality operating as the provider of the service. Efficiency reasons dictate States and localities providing the service rather than direct Federal provision. The redistribution is the same as that which would take place if the Federal Government directly provided the service.

When taxation is based on ability to pay and programs are targeted at a minimum service level, every State with any population which requires the service must participate. States and localities receive grants only because groups and individuals are to be treated equally. The role of the recipient government is the provision of the minimum prescribed services. The reason for the program or

the target population chosen is the national interest. Net gains or losses from taxes paid and grants received by a State or locality should be of little consequence in public policy. The redistribution among States is not as important as the redistribution among individuals. The important questions are the number of recipients in a government jurisdiction and the dollar amount of the service they receive contrasted with the number of taxpayers in the jurisdiction and the dollar amount of taxes paid. Classification of Federal payments to States by these varied principles of taxation and the redistribution of funds by classes of persons by income or by recipients and taxpayers would help to separate the issues involved in redesigning or changing grant formulas.

SUMMARY

All of the above assumes that one can measure ability, service levels, price differentials, and income differentials. The usual assumption is that the errors of measurement of ability and service are not great or are offsetting. One does not assume that errors of measurement reinforce one another so that the same States that lose in errors in the measure of ability also lose in the measure of service level. In fact, such a situation arises if price differentials inflates ability and deflates same dollar amount for a given service level. In this case, the redistribution is overstated; high incomes are not as high as

measured and services levels, while not as equal as supposed, are also less in high income States if prices follow incomes. Furthermore, the redistribution achieved in Federal grant program may not be in the national interest. The redistribution makes all programs more costly in high income States and local jurisdictions and less costly in low income States and local jurisdictions if price differentials follows incomes. Redistribution, then, retards economic activity in the disadvantaged States. The fact that city and county officials in an Advisory Commission on Intergovernmental Relations survey saw a deterioration in "the degree to which distribution formulas reflected program needs and fiscal effort" in the five years from 1970-71 to 1975-76 may be related to these problems of ignoring price differentials and resulting redistribution effects. The problem may be greater than merely that of grant formulas.

If States like Alaska have a cost of living 25 percent higher than other States, then the result is that the same Federal tax rates on income is more burdensome. A person in Alaska needs 25 percent more money income to be equal to persons in other States in real income. However, the Federal income tax does not recognize differences in real incomes so that the person in the State with the higher money income pays higher Federal income taxes, which discourages persons from desiring to work in these States and especially so when people make comparisons in real income. If the higher cost of living is due to higher property values which,

in turn, is due to density of population, then the progressive Federal income tax makes the cost of living higher and encourages over time a movement from high to low cost living areas.

The net result of redistribution in Federal grants and Federal progressive income tax is to encourage movement of economic activity from high to low cost living areas. People and businesses, thus, leave areas of high property values and density of population. This outward movement leaves behind unused housing and unused commercial and industrial property. These unused properties can be the magnet for inmigration of people attracted by housing and not employment. Employment for the skill level of the inmigrants is most likely to locate or move to lower cost of living areas. As a result of these movements, high land value jurisdictions tend both to have a bimodal income distribution with large numbers of high and low income individuals but fewer middle class individuals, and to have an increased need for personal services because of the mismatch of people and jobs. Local financing of these personal services further increases the cost differentials among localities. Over a long period of time, equilibrium will be reached and cost differentials will lessen. The short run disequilibrium may misallocate resources and the movement of people and jobs. The short term problems may become especially severe if the overall economy is changing in occupational composition so that fewer low

income jobs are available. Low income jobs in high cost areas will have relatively high pay compared to these same jobs elsewhere. These jobs will, thus, move away at the same time that potential employees move into the high cost areas.